

## UL TEST REPORT AND PROCEDURE

<b>Standard:</b>	UL 60950-1, 1st Edition, 2007-10-31 (Information Technology Equipment - Safety - Part 1: General Requirements) CAN/CSA C22.2 No. 60950-1-03, 1st Edition, 2006-07 (Information Technology Equipment - Safety - Part 1: General Requirements)
<b>Certification Type:</b>	Component Recognition
<b>CCN:</b>	QQGQ2, QQGQ8 (Power Supplies for Information Technology Equipment Including Electrical Business Equipment)
<b>Product:</b>	Switching Power Supply
<b>Model:</b>	PC1U-300P-.... ("." maybe 0-9, A-Z or blank).
<b>Rating:</b>	Input: 100-240 Vac, 50/60 Hz, 3.4 A-1.4 A  Output: +5 Vdc, 14 A Max., 16 A Peak; +3.3 Vdc, 16 A Max., 16 A Peak; +12V1, 16 A Max., 22 A Peak; +12V2, 10 A Max, 10 A Peak; -12 Vdc, 0.5 A Max., 0.8 A Peak; +5VSB, 2 A Max., 2.5 A Peak  Total Output = 250 W Max., 300 W Peak +5 V and +3.3 V = 90 W Max., 100 W Peak; +12V1 and +12V2 = 216 W Max., 264 W Peak; -12 V = 6 W Max., 9.6 W Peak, +5VSB = 10 W Max., 12.5 W Peak  Peak: Max. 5 seconds, 45 seconds interval except for +12V1. Peak: Max 0.5 seconds, 4.5 seconds interval +12V1 only.
<b>Applicant Name and Address:</b>	NIPRON CO LTD 2-57 OHAMA-CHO AMAGASAKI-SHI HYOGO-KEN 660-0095 JAPAN

This is to certify that representative samples of the products covered by this Test Report have been investigated in accordance with the above referenced Standards. The products have been found to comply with the requirements covering the category and the products are judged to be eligible for Follow-Up Service under the indicated Test Procedure. The manufacturer is authorized to use the UL Mark on such products which comply with this Test Report and any other applicable requirements of UL LLC ('UL') in accordance with the Follow-Up Service Agreement. Only those products which properly bear the UL Mark are considered as being covered by UL's Follow-Up Service under the indicated Test Procedure.

The applicant is authorized to reproduce the referenced Test Report provided it is reproduced in its entirety.

UL authorizes the applicant to reproduce the latest pages of the referenced Test Report consisting of the first page of the Specific Technical Criteria through to the end of the Conditions of Acceptability.

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL.

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### Supporting Documentation

The following documents located at the beginning of this Procedure supplement the requirements of this Test Report:

- A. Authorization - The Authorization page may include additional Factory Identification Code markings.
- B. Generic Inspection Instructions -
  - i. Part AC details important information which may be applicable to products covered by this Procedure. Products described in this Test Report must comply with any applicable items listed unless otherwise stated in the body of this Test Report.
  - ii. Part AE details any requirements which may be applicable to all products covered by this Procedure. Products described in this Test Report must comply with any applicable items listed unless otherwise stated in the body of each Test Report.
  - iii. Part AF details the requirements for the UL Certification Mark which is not controlled by the technical standard used to investigate these products. Products are permitted to bear only the Certification Mark(s) corresponding to the countries for which it is certified, as indicated in each Test Report.

### Product Description

Switching Power Supply Model PC1U-300P....("." is 0-9, A-Z or blank) is for building-in.

### Model Differences

Model PC1U-300P....("." is 0-9, A-z or blank. The symbol "." in the type designation may be any alphanumeric character or blank and denotes with or without 3.3 V, type of output and customer usage. The difference does not affect safety.

### Technical Considerations

- Equipment mobility : for building-in
- Operating condition : continuous
- Mains supply tolerance (%) : +10%, -15%
- Tested for IT power systems : Yes
- IT testing, phase-phase voltage (V) : 230
- Class of equipment : Class I (earthed)
- Mass of equipment (kg) : 1.25
- Protection against ingress of water : IP X0
- The product was submitted and evaluated for use at the maximum ambient temperature (Tma) permitted by the manufacturer's specification of: 40°C (100% Output); 60°C (70 % Output)
- The means of connection to the mains supply is: Pluggable A, Detachable Power Supply Cord
- The product is intended for use on the following power systems: TN
- The equipment disconnect device is considered to be: Appliance Inlet
- The power supply in this equipment was: Investigated to IEC60950-1:2001. As part of the investigation of this product, the power supply and its test report were reviewed and found to comply with UL60950-1.
- Altitude of operation (m) : up to 3000 m

### Engineering Conditions of Acceptability

For use only in or with complete equipment where the acceptability of the combination is determined by UL LLC. When installed in an end-product, consideration must be given to the following:

- The following Production-Line tests are conducted for this product: Electric Strength , Earthing

#### Continuity

- The end-product Electric Strength Test is to be based upon a maximum working voltage of: Primary-Earthed Dead Metal: 445 Vrms, 907 Vpk.
- The following secondary output circuits are SELV: All
- The following secondary output circuits are at non-hazardous energy levels: All
- The following output terminals were referenced to earth during performance testing: All
- The power supply terminals and/or connectors are: Suitable for factory wiring only and not investigated for field wiring.
- The maximum investigated branch circuit rating is: 20 A
- The investigated Pollution Degree is: 2
- Proper bonding to the end-product main protective earthing termination is: Required ,
- An investigation of the protective bonding terminals has: Been conducted
- The following magnetic devices (e.g. transformers or inductor) are provided with an OBJ2 insulation system with the indicated rating greater than Class A (105°C): T101 (Class B)
- The following end-product enclosures are required: Fire , Electrical
- The equipment is suitable for direct connection to: AC mains supply
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The following marking is provided by the Applicant, but was not tested or evaluated in this investigation: Power supply must be installed in the end product with distance of more than 3 cm from air opening-inlet to the barrier and of more than 3 cm from the air opening-outlet to the barrier.

#### Additional Information

This Test Report was transferred from Volume X1 to Volume X2.

DC Output -----	Load Current
-----	Max. --- Peak
+5 V -----	14 A --- 16 A
+3.3 V -----	16 A --- 16 A
+12V1 -----	16 A --- 22 A
+12V2 -----	10 A --- 10 A
-12 V -----	0.5 A --- 0.8 A
+5VSB -----	2 A ----- 2.5 A

Peak: Max. 5 seconds, 45 second interval except for +12V1

Peak: Max. 0.5 seconds, 4.5 seconds interval for +12 V1

When connected only to +5 V and +3.3 V, the Max/Peak output power is 90/100 W and the load current is as in the above table, "Max" and "Peak" of "Load Current"

When connected only to +12V1 and +12V2, the Max/Peak output power is 216/264 W and the load current is as in the above table, "Max" and "Peak" of "Load Current"

When connected only to -12 V, Max/Peak output power is 6/9.6 W and the load current is as in the above table, "Max" and "Peak" of "Load Current"

When connected only to +5VSB, Max/Peak output power is 10/12.5 W and the load current is as in the above table, "Max" and "Peak" of "Load Current"

When connected only to +5 V, +3.3 V, +12 V1, +12V2, -12 V and +5VSB, Max/Peak output power is 250/300

W and the load current is as in the above table, "Max" and "Peak" of "Load Current".

**Ventilation Openings -**

Front Openings - Multiple circular openings measuring 2.6 mm diameter located by Appliance Inlet. See Enclosures, Photographs ID 3-01.

Rear Openings - Six slots measuring approximately 2.8 mm by 15.7 mm located above output connectors. See Enclosures, Photographs ID 3-02.

The power supply unit is not provided with power supply cord.

**Markings and instructions**

Clause Title	Marking or Instruction Details
Power rating - Ratings	Ratings (voltage, frequency/dc, current)
Power rating - Company identification	Listee's or Recognized company's name, Trade Name, Trademark or File Number
Power rating - Model	Model Number
Fuses - Operator caution statement	"CAUTION: For continued protection against risk of fire, replace only with same type and rating of fuse".

**Special Instructions to UL Representative**

N/A

**Production-Line Testing Requirements**

**Electric Strength Test Special Constructions - Refer to Generic Inspection Instructions, Part AC for further information.**

Model	Component	Removable Parts	Test probe location	V rms	V dc	Test Time, s
N/A	-	-	-	-	-	-

**Earthing Continuity Test Exemptions - This test is not required for the following models:**

**Electric Strength Test Exemptions - This test is not required for the following models:**

**Electric Strength Test Component Exemptions - The following solid-state components may be disconnected from the remainder of the circuitry during the performance of this test:**

N/A

**Sample and Test Specifics for Follow-Up Tests at UL**

Model	Component	Material	Test	Sample(s)	Test Specifics
N/A	-	-	-	-	-